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EXAMINER
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MARSH, OLIVIA MARIE

ART UNIT	PAPER NUMBER
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2686

DATE MAILED: 08/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/731,653

Applicant(s)

GOLDBERG, STEVEN JEFFREY

Examiner

Olivia Marsh

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 12 May 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-32 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Response to Arguments*

1. Applicant's arguments filed 5/12/2005 have been fully considered but they are not persuasive for the following reasons:
2. Regarding arguments presented against the Lussenhop and Muthuswamy references, in response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, both the references Lussenhop (column 1, lines 32-41) and Muthuswamy (paragraphs 5-6) pertain to maintaining or remedying call quality based on signal strength measurements.
3. Regarding arguments presented against the Johansson reference, in response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., extrapolation that includes determining what a result would be if the power regulation was active) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

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4. Regarding arguments against the Muthuswamy and Zhang references, in response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). The applicant correctly observes the Muthuswamy and Zhang references do not teach activating and deactivating a performance enhancement within the mobile device; however, the Examiner would like to respectfully point out to the applicant that the Lussenhop reference meets this limitation as used in the rejection.

5. Regarding applicants argument stating the Lussenhop reference does not disclose using any type of performance enhancement (page 15), the Examiner would like to respectfully point out that at no time in the claims does the applicant further define the limitation "performance enhancement." Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

6. In view of the above, the rejection using Lussenhop, Muthuswamy, Zhang, and Johansson are maintained as repeated below.

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1-2, 4, 5, 6, 9, 10, and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lussenhop *et al.* (U.S. 6131021) in view of Muthuswamy *et al.* (US 2004/0192290 A1).

As to claim 1, Lussenhop teaches a method to be applied in a radiotelephone (column 2, lines 51-52), reading on claimed "wireless transmit/receive unit," comprising connecting a radio transceiver to a radio frequency source (column 3, lines 46-47), switching over the component [of the radiotelephone] into the operating state of attenuation (column 3, lines 55-56), reading on claimed "operating a radio link to the WTRU with a performance enhancement active," and measuring the signal level by means of the measuring device (column 3, lines 57-58), reading on claimed "measuring the operating results with the performance enhancement active." He also teaches changing the component into an operating state in which it has no attenuation (column 3, lines 49-50), reading on claimed "operating a radio link to the WTRU with the performance enhancement inactive," measuring the signal level by means of a measuring device present in the radio transceiver (column 3, lines 56-57), reading on claimed "measuring the operating results with the performance enhancement inactive," and calculating the difference between the measured and remeasured signal levels (column 3, lines 60-61), reading on claimed "comparing the measurements with the performance enhancement active and the performance enhancement inactive."

However, Lussenhop fails to teach preparing and displaying a display indicator on the WTRU showing the performance difference of the WTRU when the performance enhancement is active and inactive.

In an analogous art, Muthuswamy teaches a call quality indicator application (250) that provides mobile users feedback on overall call quality of the two-way link for each of a plurality of communication calls (page 4, paragraph 34). The application enables users at both ends to gain a better understanding of the link that is having the problems using the call quality indicator application (250) (page 4, paragraph 34). In Figures 4 and 5, Muthuswamy teaches a display (240) of the communication device in which a first call quality indicator (300), reading on claimed "display indicator," showing the quality of communication between the originating communication device and the corresponding base station and a second call quality indicator (305), reading on claimed "display indicator," showing the quality of communication between the destination device of the call and the corresponding base station (page 5, paragraph 39). He further teaches the call quality indicator application (250) determines the first call quality indicator (300) and the second call quality indicator (305) to be displayed based on either RSSI (received signal strength) or BER (bit error rate) (page 5, paragraph 40).

It would have been obvious to one of ordinary skill in the art at the time of invention to operate a radio link to the WTRU with a performance enhancement active, measure the operating results with the performance enhancement active, operate a radio link to the WTRU with the performance enhancement inactive, measure the operating results with the performance enhancement inactive and compare the measurements with the performance enhancement active and the performance enhancement inactive, as taught by Lussenhop, to prepare and display a display indicator on the WTRU showing the performance difference of the WTRU when the performance enhancement is active and inactive, as taught by Muthuswamy,

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in order to demonstrate to the wireless user the performance enhancement within the mobile device does indeed improve the quality of service received by the wireless user from the wireless communication system.

As to **claim 4**, Lussenhop teaches a method to be applied in a radiotelephone (column 2, lines 51-52), reading on claimed "wireless transmit/receive unit," comprising connecting a radio transceiver to a radio frequency source (column 3, lines 46-47), switching over the component [of the radiotelephone] into the operating state of attenuation (column 3, lines 55-56) and measuring the signal level by means of the measuring device (column 3, lines 57-58), reading on claimed "measuring the characteristics of a received signal at the WTRU with a performance enabled." He also teaches changing the component into an operating state in which it has no attenuation (column 3, lines 49-50), measuring the signal level by means of a measuring device present in the radio transceiver (column 3, lines 56-57) and calculating the difference between the measured and remeasured signal levels (column 3, lines 60-61), reading on claimed "calculating a gain value based upon the performance difference in the WTRU between when the performance enhancement is enabled and not enabled."

However, Lussenhop fails to teach preparing and displaying a display indicator on the WTRU based upon the gain value.

In an analogous art, Muthuswamy teaches a call quality indicator application (250) that provides mobile users feedback on overall call quality of the two-way link for each of a plurality of communication calls (page 4, paragraph 34). The application enables users at both ends to gain a better understanding of the link that is having the problems using the call quality indicator application (250) (page 4, paragraph 34). In Figures 4 and 5, Muthuswamy teaches a display (240) of the communication device in which a first call quality indicator (300), reading on claimed "display indicator," showing the quality of communication between the originating

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communication device and the corresponding base station and a second call quality indicator (305), reading on claimed "display indicator," showing the quality of communication between the destination device of the call and the corresponding base station (page 5, paragraph 39). He further teaches the call quality indicator application (250) determines the first call quality indicator (300) and the second call quality indicator (305) to be displayed based on either RSSI (received signal strength) or BER (bit error rate) (page 5, paragraph 40).

It would have been obvious to one of ordinary skill in the art at the time of invention to measure the characteristics of a received signal at the WTRU with a performance enhancement enabled, calculate a gain value based upon the performance difference in the WTRU between when the performance enhancement is enabled and not enabled, as taught by Lussenhop, to prepare and display a display indicator on the WTRU based on the gain value, as taught by Muthuswamy, in order to demonstrate to the wireless user the performance enhancement within the mobile device does indeed improve the quality of service received by the wireless user from the wireless communication system.

As to claim 5, Lussenhop teaches a method to be applied in a radiotelephone (column 2, lines 51-52), reading on claimed "wireless transmit/receive unit," comprising connecting a radio transceiver to a radio frequency source (column 3, lines 46-47), switching over the component [of the radiotelephone] into the operating state of attenuation (column 3, lines 55-56), reading on claimed "activating a performance enhancement in the WTRU," and measuring the signal level by means of the measuring device (column 3, lines 57-58), reading on claimed "measuring the operating results with the performance enhancement active." He also teaches changing the component into an operating state in which it has no attenuation (column 3, lines 49-50), reading on claimed "turning the performance enhancement off," measuring the signal level by means of a measuring device present in the radio transceiver (column 3, lines 56-57),



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reading on claimed "measuring the operating results with the performance enhancement inactive," and calculating the difference between the measured and remeasured signal levels (column 3, lines 60-61).

However, Lussenhop fails to preparing and displaying a display indicator on the WTRU showing the performance value with the performance enhancement active and preparing and displaying a display indicator on the WTRU showing the performance value with the performance enhancement inactive.

In an analogous art, Muthuswamy teaches a call quality indicator application (250) that provides mobile users feedback on overall call quality of the two-way link for each of a plurality of communication calls (page 4, paragraph 34). The application enables users at both ends to gain a better understanding of the link that is having the problems using the call quality indicator application (250) (page 4, paragraph 34). In Figures 4 and 5, Muthuswamy teaches a display (240) of the communication device in which a first call quality indicator (300), reading on claimed "display indicator," showing the quality of communication between the originating communication device and the corresponding base station and a second call quality indicator (305), reading on claimed "display indicator," showing the quality of communication between the destination device of the call and the corresponding base station (page 5, paragraph 39). He further teaches the call quality indicator application (250) determines the first call quality indicator (300) and the second call quality indicator (305) to be displayed based on either RSSI (received signal strength) or BER (bit error rate) (page 5, paragraph 40).

It would have been obvious to one of ordinary skill in the art at the time of invention to activate a performance enhancement in the WTRU, measure the operating results with the performance enhancement active, turning the performance enhancement off, measuring the operating results with the performance enhancement inactive, as taught by Lussenhop, to

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prepare and display a display indicator on the WTRU showing the performance difference of the WTRU when the performance enhancement is active and inactive, as taught by Muthuswamy, in order to demonstrate to the wireless user the performance enhancement within the mobile device does indeed improve the quality of service received by the wireless user from the wireless communication system.

As to **claim 6**, Lussenhop teaches a method to be applied in a radiotelephone (column 2, lines 51-52), reading on claimed "wireless transmit/receive unit," comprising connecting a radio transceiver to a radio frequency source (column 3, lines 46-47), switching over the component [of the radiotelephone] into the operating state of attenuation (column 3, lines 55-56), reading on claimed "turning the performance enhancement on," and measuring the signal level by means of the measuring device (column 3, lines 57-58), reading on claimed "measuring the operating results with the performance enhancement active." He also teaches changing the component into an operating state in which it has no attenuation (column 3, lines 49-50), reading on claimed "deactivating a performance enhancement in the WTRU," measuring the signal level by means of a measuring device present in the radio transceiver (column 3, lines 56-57), reading on claimed "measuring the operating results with the performance enhancement inactive," and calculating the difference between the measured and remeasured signal levels (column 3, lines 60-61).

However, Lussenhop fails to preparing and displaying a display indicator on the WTRU showing the performance value with the performance enhancement active and preparing and displaying a display indicator on the WTRU showing the performance value with the performance enhancement inactive.

In an analogous art, Muthuswamy teaches a call quality indicator application (250) that provides mobile users feedback on overall call quality of the two-way link for each of a plurality

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of communication calls (page 4, paragraph 34). The application enables users at both ends to gain a better understanding of the link that is having the problems using the call quality indicator application (250) (page 4, paragraph 34). In Figures 4 and 5, Muthuswamy teaches a display (240) of the communication device in which a first call quality indicator (300), reading on claimed "display indicator," showing the quality of communication between the originating communication device and the corresponding base station and a second call quality indicator (305), reading on claimed "display indicator," showing the quality of communication between the destination device of the call and the corresponding base station (page 5, paragraph 39). He further teaches the call quality indicator application (250) determines the first call quality indicator (300) and the second call quality indicator (305) to be displayed based on either RSSI (received signal strength) or BER (bit error rate) (page 5, paragraph 40).

It would have been obvious to one of ordinary skill in the art at the time of invention to deactivate a performance enhancement in the WTRU, measure the operating results with the performance enhancement is inactive, turning the performance enhancement on, measuring the operating results with the performance enhancement is active, as taught by Lussenhop, to prepare and display a display indicator on the WTRU showing the performance difference of the WTRU when the performance enhancement is active and inactive, as taught by Muthuswamy, in order to demonstrate to the wireless user the performance enhancement within the mobile device does indeed improve the quality of service received by the wireless user from the wireless communication system.

As to **claim 9**, Lussenhop teaches a radio transceiver for use in a radiotelephone (column 2, lines 51-54), reading on claimed "handset," that comprises a microcomputer (7), reading on claimed "activating means," that switches on amplifier (4), reading on claimed "performance enhancement," on and measures the signal level, reading on claimed "operating

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results," using limiter circuit (1), reading on claimed "measuring means," then switches the amplifier (4) off and the limiter circuit (1) measures the signal strength again (column 7, lines 44-51), reading on claimed "activating means for activating and deactivating a performance enhancement in said handset and measuring means for measuring operating results of said handset with the performance enhancement active and the performance enhancement inactive."

However, Lussenhop fails to teach a display means for displaying an indicator on said handset, said indicator showing operating results of said handset with the performance enhancement active and the performance enhancement inactive.

In an analogous art, Muthuswamy teaches a call quality indicator application (250), reading on claimed "display means," that provides mobile users feedback on overall call quality of the two-way link for each of a plurality of communication calls (page 4, paragraph 34). The application enables users at both ends to gain a better understanding of the link that is having the problems using the call quality indicator application (250) (page 4, paragraph 34). In Figures 4 and 5, Muthuswamy teaches a display (240) of the communication device in which a first call quality indicator (300), reading on claimed "indicator," showing the quality of communication between the originating communication device and the corresponding base station and a second call quality indicator (305), reading on claimed "indicator," showing the quality of communication between the destination device of the call and the corresponding base station (page 5, paragraph 39). He further teaches the call quality indicator application (250) determines the first call quality indicator (300) and the second call quality indicator (305) to be displayed based on either RSSI (received signal strength) or BER (bit error rate) (page 5, paragraph 40).

It would have been obvious to one of ordinary skill in the art at the time of invention to develop a handset with activating means for activating and deactivating a performance

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enhancement in said handset and measuring means for measuring operating results of said handset with the performance enhancement active and the performance enhancement inactive, as taught by Lussenhop, and a display means for displaying an indicator on said handset, said indicator showing operating results of said handset with the performance enhancement active and the performance enhancement inactive, as taught by Muthuswamy, in order to demonstrate to the wireless user the performance enhancement within the mobile device does indeed improve the quality of service received by the wireless user from the wireless communication system.

As to claim 10, Lussenhop and Muthuswamy teach everything as applied in claim 9 and Lussenhop further teaches an external measuring computer (10) that computes the difference between the signal level measured by the limiter circuit (1) when the amplifier (4) was on and the signal level measured by the limiter circuit (1) when the amplifier (4) was off (column 7, lines 51-54). However, Lussenhop fails to teach the radio transceiver of the radiotelephone comprises comparing means for comparing the measured operating results of said handset with the performance enhancement active and the performance enhancement inactive and wherein said indicator shows the comparison results.

Muthuswamy further teaches the call quality indicator application (250), reading on claimed "comparing means," utilizes a plurality of call quality threshold levels (270) stored within the call quality threshold memory (265) (page 4, paragraph 34). In Figures 4 and 5, Muthuswamy teaches a display (240) of the communication device in which a first call quality indicator (300), reading on claimed "indicator," showing the quality of communication between the originating communication device and the corresponding base station and a second call quality indicator (305), reading on claimed "indicator," showing the quality of communication between the destination device of the call and the corresponding base station (page 5,

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paragraph 39). In Figure 4, the indicators demonstrate all channels possess a good quality and having a RF channel quality greater than predetermined thresholds (page 5, paragraph 40). In Figure 5, the indicators demonstrate the RF channel quality of either of both of the outbound RF channel and inbound RF channel associated with the destination communication device can be less than the predetermined threshold (page 5, paragraph 40).

It would have been obvious to one of ordinary skill in the art at the time of invention to further require the handset, taught by Lussenhop and Muthuswamy, to possess a comparing means for comparing the measured operating results of said handset with the performance enhancement active and the performance enhancement inactive and wherein said indicator shows the comparison results, also taught by Muthuswamy, to demonstrate to the user the difference in signal quality received and transmitted by the handset when an amplifier is turned on or off in the handset.

As to **claim 11**, Lussenhop and Muthuswamy teach everything as applied in claim 9; however, Lussenhop fails to teach said indicator includes differently labeled elements to distinguish between operating results with the performance enhancement active and the performance enhancement inactive.

Muthuswamy further teaches in Figure 5 the difference between the indicators (300) and (305) as the indicator (300) demonstrates a good quality signal by displaying several vertical bars and the indicator (305) demonstrates a poor signal quality by not displaying any vertical bars (see also page 5, paragraph 40).

It would have been obvious to one of ordinary skill in the art at the time of invention to further require the handset and indicator, taught by Lussenhop and Muthuswamy, that the indicator includes differently labeled elements to distinguish between operating results with the performance enhancement active and the performance enhancement inactive, as taught by

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Muthuswamy, to provide the user the ability to easily discern the difference in signal quality between the two indicators.

As to **claim 16**, Lussenhop and Muthuswamy teach everything as applied in claim 9 and Lussenhop teaches, as stated previously, that the limiter circuit (1) measures the signal level when amplifier (4) is turned off (column 7, lines 48-50), reading on claimed "said measuring means only measures the operating results of said handset with the performance enhancement inactive." The Examiner contends that during the time period the amplifier is off, the limiter circuit (1) can only measure the operating results when the amplifier is off.

2. **Claim 17** is rejected under 35 U.S.C. 103(a) as being unpatentable over Lussenhop and Muthuswamy as applied to claims 9 and 16 above, and further in view of Johansson (U.S. 5,946,612).

As to **claim 17**, Lussenhop and Muthuswamy teach everything as applied in claim 9 and Lussenhop teaches everything as applied in claim 16; however, neither teach said handset further includes extrapolating means for extrapolating the operating results of said handset based upon the measured operating results of said handset with the performance enhancement inactive.

In an analogous art, Johansson teaches a receiver (150), reading on claimed "base station," that measures the signal strength and duration of transmissions from the mobile stations (130) and as the receiver (150) takes the signal strength measurements, the processor (160), reading on claimed "means for extrapolating," records the data and extrapolates cellular telephone traffic volume (column 5, lines 54-60).

It would have been obvious to one of ordinary skill in the art at the time of invention to further require the handset, disclosed by Lussenhop and Muthuswamy, to comprise

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extrapolating means for extrapolating the operating results of said handset based upon the measured operating results of said handset with the performance enhancement inactive, as taught by Johansson, to provide the capability of a user to predict the results if the performance enhancement was active.

3. **Claims 7-8, 18-19, and 22** are rejected under 35 U.S.C. 103(a) as being unpatentable over Lussenhop *et al.* (U.S. 6131021) in view of Muthuswamy *et al.* (US 2004/0192290 A1) and further in view of Zhang (U.S. 2003/0064744 A1).

As to **claim 7**, Lussenhop teaches a radio transceiver, reading on claimed "wireless transmit/receive unit," in a radiotelephone, for use in a wireless communication system (column 2, lines 51-54), and the radio transceiver is connected to a radio frequency source (8) having an output signal (column 7, lines 38-39), reading on claimed "transmitting signals from the BS to the WTRU." Lussenhop further teaches that the radio transceiver comprises a microcomputer (7) that switches on amplifier (4), reading on claimed "activating an enhancement in the WTRU," and measures the signal level using limiter circuit (1) then switches the amplifier (4) off and the limiter circuit (1) measures the signal strength again (column 7, lines 44-51), reading on claimed "deactivating the enhancement in the WTRU."

However, Lussenhop fails to teach measuring the operating results at the BS and comparing the measurement results and the BS.

In an analogous art, Zhang teaches a base station (210) comprises a SIR measurement unit (313) that measures the signal-to-interference ratio (SIR) for the received wireless transmission of each of the mobile devices by analyzing the output signal of the rake combiner (311) (page 4, paragraph 33). Zhang further teaches the base station (210) comprises a SIR comparator (314) that compares the measured SIR for each mobile device with the SIR target



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for that device and generates a Transmit Power Control (TPC) signal for instructing the mobile device to increase or decrease its transmission power (page 4, paragraph 33).

It would have been obvious to one of ordinary skill in the art at the time of invention to develop a method comprising activating and deactivating the enhancement in the WTRU and transmitting signals from the BS to the WTRU, as taught by Lussenhop, and measuring the operating results at the BS and comparing the measurement results at the BS, as taught by Zhang, to provide the system the capability of providing the results to the wireless user to enable the user to discern the signal quality when the performance enhancement is on and off.

Lussenhop teaches activating and deactivating the enhancement in the WTRU and transmitting signals from the BS to the WTRU and Zhang teaches measuring the operating results at the BS and comparing the measurement results at the BS; however, neither teach displaying the comparison results to the user via the WTRU.

In an analogous art, Muthuswamy teaches a call quality indicator application (250) utilizes a plurality of call quality threshold levels (270) stored within the call quality threshold memory (265) (page 4, paragraph 34). In Figures 4 and 5, Muthuswamy teaches a display (240) of the communication device in which a first call quality indicator (300) showing the quality of communication between the originating communication device and the corresponding base station and a second call quality indicator (305) showing the quality of communication between the destination device of the call and the corresponding base station (page 5, paragraph 39). In Figure 4, the indicators demonstrate all channels possess a good quality and having a RF channel quality greater than predetermined thresholds (page 5, paragraph 40). In Figure 5, the indicators demonstrate the RF channel quality of either of both of the outbound RF channel and inbound RF channel associated with the destination communication device can be less than the predetermined threshold (page 5, paragraph 40).

It would have been obvious to one of ordinary skill in the art at the time of invention to develop a method comprising activating and deactivating the enhancement in the WTRU and transmitting signals from the BS to the WTRU, as taught by Lussenhop, measuring the operating results at the BS and comparing the measurement results at the BS, as taught by Zhang, and displaying the comparison results to the user via the WTRU, as taught by Muthuswamy, to demonstrate to the user the difference in signal quality received and transmitted by the handset when an amplifier is turned on and off in the handset.

As to **claim 8**, Lussenhop teaches a radio transceiver, reading on claimed "wireless transmit/receive unit," in a radiotelephone, for use in a wireless communication system (column 2, lines 51-54), and the radio transceiver is connected to a radio frequency source (8) having an output signal (column 7, lines 38-39), reading on claimed "transmitting signals from the BS to the WTRU." Lussenhop further teaches that the radio transceiver comprises a microcomputer (7) that switches on amplifier (4), reading on claimed "activating an enhancement in the WTRU," and measures the signal level using limiter circuit (1) then switches the amplifier (4) off and the limiter circuit (1) measures the signal strength again (column 7, lines 44-51), reading on claimed "deactivating the enhancement in the WTRU."

However, Lussenhop fails to teach measuring the operating results at the BS and comparing the measurement results and the BS.

In an analogous art, Zhang teaches a base station (210) comprises a SIR measurement unit (313) that measures the signal-to-interference ratio (SIR) for the received wireless transmission of each of the mobile devices by analyzing the output signal of the rake combiner (311) (page 4, paragraph 33). Zhang further teaches the base station (210) comprises a SIR comparator (314) that compares the measured SIR for each mobile device with the SIR target

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for that device and generates a Transmit Power Control (TPC) signal for instructing the mobile device to increase or decrease its transmission power (page 4, paragraph 33).

It would have been obvious to one of ordinary skill in the art at the time of invention to develop a method comprising activating and deactivating the enhancement in the WTRU and transmitting signals from the BS to the WTRU, as taught by Lussenhop, and measuring the operating results at the BS and comparing the measurement results at the BS, as taught by Zhang, to provide the system the capability of providing the results to the wireless user to enable the user to discern the signal quality when the performance enhancement is on and off.

Lussenhop teaches activating and deactivating the enhancement in the WTRU and transmitting signals from the BS to the WTRU and Zhang teaches measuring the operating results at the BS and comparing the measurement results at the BS; however, neither teach displaying the comparison results to the user via the WTRU.

In an analogous art, Muthuswamy teaches a call quality indicator application (250) utilizes a plurality of call quality threshold levels (270) stored within the call quality threshold memory (265) (page 4, paragraph 34). In Figures 4 and 5, Muthuswamy teaches a display (240) of the communication device in which a first call quality indicator (300) showing the quality of communication between the originating communication device and the corresponding base station and a second call quality indicator (305) showing the quality of communication between the destination device of the call and the corresponding base station (page 5, paragraph 39). In Figure 4, the indicators demonstrate all channels possess a good quality and having a RF channel quality greater than predetermined thresholds (page 5, paragraph 40). In Figure 5, the indicators demonstrate the RF channel quality of either of both of the outbound RF channel and inbound RF channel associated with the destination communication device can be less than the predetermined threshold (page 5, paragraph 40).

It would have been obvious to one of ordinary skill in the art at the time of invention to develop a method comprising activating and deactivating the enhancement in the WTRU and transmitting signals from the BS to the WTRU, as taught by Lussenhop, measuring the operating results at the BS and comparing the measurement results at the BS, as taught by Zhang, and displaying the comparison results to the user via the WTRU, as taught by Muthuswamy, to demonstrate to the user the difference in signal quality received and transmitted by the handset when an amplifier is turned on an off in the handset.

As to **claim 18**, Lussenhop teaches a radio transceiver in a radiotelephone, for use in a wireless communication system (column 2, lines 51-54), reading on claimed "handset," that comprises a microcomputer (7), reading on claimed "activating means," that switches on amplifier (4), reading on claimed "performance enhancement," on and measures the signal level, reading on claimed "operating results," using limiter circuit (1) then switches the amplifier (4) off and the limiter circuit (1) measures the signal strength again (column 7, lines 44-51), reading on claimed "activating means for activating and deactivating a performance enhancement in said handset."

However, Lussenhop fails to teach a display means for displaying an indicator on said handset, said indicator showing operating results of said handset with the performance enhancement active and the performance enhancement inactive.

In an analogous art, Muthuswamy teaches a call quality indicator application (250), reading on claimed "display means," that provides mobile users feedback on overall call quality of the two-way link for each of a plurality of communication calls (page 4, paragraph 34). The application enables users at both ends to gain a better understanding of the link that is having the problems using the call quality indicator application (250) (page 4, paragraph 34). In Figures 4 and 5, Muthuswamy teaches a display (240) of the communication device in which a first call

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quality indicator (300), reading on claimed "indicator," showing the quality of communication between the originating communication device and the corresponding base station and a second call quality indicator (305), reading on claimed "indicator," showing the quality of communication between the destination device of the call and the corresponding base station (page 5, paragraph 39). He further teaches the call quality indicator application (250) determines the first call quality indicator (300) and the second call quality indicator (305) to be displayed based on either RSSI (received signal strength) or BER (bit error rate) (page 5, paragraph 40).

It would have been obvious to one of ordinary skill in the art at the time of invention to develop a wireless communication system comprising a handset with activating means for activating and deactivating a performance enhancement in said handset, as taught by Lussenhop, and a display means for displaying an indicator on said handset, said indicator showing operating results of said handset with the performance enhancement active and the performance enhancement inactive, as taught by Muthuswamy, in order to demonstrate to the wireless user the performance enhancement within the mobile device does indeed improve the quality of service received by the wireless user from the wireless communication system.

Lussenhop teaches a handset with activating means for activating and deactivating a performance enhancement in said handset and Muthuswamy teaches a display means for displaying an indicator on said handset, said indicator showing operating results of said handset with the performance enhancement active and the performance enhancement inactive; however, neither teach a base station possessing measuring means for measuring operating results of said handset with the performance enhancement active and the performance enhancement inactive.

In an analogous art, Zhang teaches a base station (210) comprises a SIR measurement unit (313), reading on claimed "measuring means," that measures the signal-to-interference ratio (SIR) for the received wireless transmission of each of the mobile devices by analyzing the output signal of the rake combiner (311) (page 4, paragraph 33).

It would have been obvious to one of ordinary skill in the art at the time of invention to further require a wireless communication system comprising a handset with activating means for activating and deactivating a performance enhancement in said handset, as taught by Lussenhop, and a display means for displaying an indicator on said handset, said indicator showing operating results of said handset with the performance enhancement active and the performance enhancement inactive, as taught by Muthuswamy, to possess a base station with measuring means for measuring operating results of said handset with the performance enhancement active and the performance enhancement inactive, as taught by Zhang, to provide the capability of the wireless communication system to control the uplink signal strength of the handset.

As to claim 19, Lussenhop, Muthuswamy, and Zhang teach everything as applied in claim 18; however, neither Lussenhop or Muthuswamy teach the base station further includes comparing means for comparing the measured operating results of said handset with the performance enhancement active and the performance enhancement inactive.

Zhang further teaches the base station (210) comprises a SIR comparator (314) that compares the measured SIR for each mobile device with the SIR target for that device and generates a Transmit Power Control (TPC) signal for instructing the mobile device to increase or decrease its transmission power (page 4, paragraph 33).

It would have been obvious to one of ordinary skill in the art at the time of invention further require the wireless communication system comprising a handset with activating means

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for activating and deactivating a performance enhancement in said handset and a display means for displaying an indicator on said handset, said indicator showing operating results of said handset with the performance enhancement active and the performance enhancement inactive, taught by Lussenhop and Muthuswamy, and a base station with measuring means for measuring operating results of said handset with the performance enhancement active and the performance enhancement inactive, taught by Zhang, and the base station further comprising a comparing means for comparing the measured operating results of said handset with the performance enhancement active and the performance enhancement inactive, also taught by Zhang, to provide the system the capability of providing the results to the wireless user to enable the user to discern the signal quality when the performance enhancement is on and off.

Lussenhop, Muthuswamy, and Zhang teach everything as applied in claim 18 and Zhang teaches the base station further comprising a comparing means for comparing the measured operating results of said handset with the performance enhancement active and the performance enhancement inactive; however, neither Lussenhop or Zhang teach wherein said indicator shows the comparison results.

Muthuswamy further teaches the call quality indicator application (250) utilizes a plurality of call quality threshold levels (270) stored within the call quality threshold memory (265) (page 4, paragraph 34). In Figures 4 and 5, Muthuswamy teaches a display (240) of the communication device in which a first call quality indicator (300), reading on claimed "indicator," showing the quality of communication between the originating communication device and the corresponding base station and a second call quality indicator (305), reading on claimed "indicator," showing the quality of communication between the destination device of the call and the corresponding base station (page 5, paragraph 39). In Figure 4, the indicators demonstrate all channels possess a good quality and having a RF channel quality greater than predetermined

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thresholds (page 5, paragraph 40). In Figure 5, the indicators demonstrate the RF channel quality of either of both of the outbound RF channel and inbound RF channel associated with the destination communication device can be less than the predetermined threshold (page 5, paragraph 40).

It would have been obvious to one of ordinary skill in the art at the time of invention further require the wireless communication system comprising a handset with activating means for activating and deactivating a performance enhancement in said handset and a display means for displaying an indicator on said handset, said indicator showing operating results of said handset with the performance enhancement active and the performance enhancement inactive, taught by Lussenhop and Muthuswamy, and a base station with measuring means for measuring operating results of said handset with the performance enhancement active and the performance enhancement inactive, taught by Zhang, and the base station further comprising a comparing means for comparing the measured operating results of said handset with the performance enhancement active and the performance enhancement inactive, also taught by Zhang, and that said indicator shows the comparison results, also taught by Muthuswamy, to demonstrate to the user the difference in signal quality received and transmitted by the handset when an amplifier is turned on an off in the handset.

As to claim 22, Lussenhop, Muthuswamy, and Zhang teach everything as applied in claim 18; however, neither Lussenhop or Zhang teach said indicator includes differently labeled elements to distinguish between operating results with the performance enhancement active and the performance enhancement inactive.

Muthuswamy further teaches in Figure 5 the difference between the indicators (300) and (305) as the indicator (300) demonstrates a good quality signal by displaying several vertical



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bars and the indicator (305) demonstrates a poor signal quality by not displaying any vertical bars (see also page 5, paragraph 40).

It would have been obvious to one of ordinary skill in the art at the time of invention to further limit the wireless communication system, handset, base station, and indicator, taught by Lussenhop, Muthuswamy, and Zhang, so that the indicator includes differently labeled elements to distinguish between operating results with the performance enhancement active and the performance enhancement inactive, also taught by Muthuswamy, to provide the user the ability to easily discern the difference in signal quality between the two indicators.

4. **Claims 20-21** are rejected under 35 U.S.C. 103(a) as being unpatentable over Lussenhop, Muthuswamy, and Zhang as applied to claim 18 above, and further in view of Johansson (U.S. 5,946,612).

As to **claim 20**, Lussenhop, Muthuswamy, and Zhang teach everything as applied in claim 18; however, neither teach said base station further includes extrapolating means for extrapolating the operating results of said handset based upon the measured operating results of said handset with the performance enhancement inactive.

In an analogous art, Johansson teaches a receiver (150), reading on claimed "base station," that measures the signal strength and duration of transmissions from the mobile stations (130) and as the receiver (150) takes the signal strength measurements, the processor (160), reading on claimed "means for extrapolating," records the data and extrapolates cellular telephone traffic volume (column 5, lines 54-60).

It would have been obvious to one of ordinary skill in the art at the time of invention to further require the base station, disclosed by Lussenhop, Muthuswamy, and Zhang, to comprise extrapolating means for extrapolating the operating results of said handset based upon the

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measured operating results of said handset with the performance enhancement inactive, as taught by Johansson, to provide the capability of a user to predict the results if the performance enhancement was active.

As to claim 21, Lussenhop, Muthuswamy, and Zhang teach everything as applied in claim 18, and Johansson teaches everything as applied in claim 20; however, Lussenhop, Muthuswamy, nor Zhang teach said extrapolating means base extrapolation on the measured operating results of said handset without the performance enhancement.

In an analogous art, Johansson teaches a receiver (150), reading on claimed "base station," that measures the signal strength and duration of transmissions from the mobile stations (130) and as the receiver (150) takes the signal strength measurements, the processor (160) records the data and extrapolates cellular telephone traffic volume (column 5, lines 54-60), reading on claimed "extrapolating means bases the extrapolation on the measured operating results of said handset."

It would have been obvious to one of ordinary skill in the art at the time of invention to further require the base station, disclosed by Lussenhop, Muthuswamy, and Zhang, to comprise extrapolating means for extrapolating the operating results of said handset based upon the measured operating results of said handset with the performance enhancement inactive, as taught by Johansson, and for the extrapolating means to base the extrapolation on the measured operating results of said handset without the performance enhancement, also taught by Johansson, to provide the capability of a user to predict the results if the performance enhancement was active.

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5. **Claims 27-28** are rejected under 35 U.S.C. 103(a) as being unpatentable over Lussenhop *et al.* (U.S. 6131021) in view of Muthuswamy *et al.* (US 2004/0192290 A1) and in further in view of Johansson (U.S. 5,946,612).

As to **claim 27**, Lussenhop teaches a radio transceiver in a radiotelephone, for use in a wireless communication system (column 2, lines 51-54), reading on claimed "handset," and the radio transceiver is connected to a radio frequency source (8) having an output signal (column 7, lines 38-39), reading on claimed "base station." Lussenhop further teaches that the radio transceiver comprises a microcomputer (7) that switches on amplifier (4), reading on claimed "performance enhancement," on and measures the signal level, reading on claimed "operating results," using limiter circuit (1) then switches the amplifier (4) off and the limiter circuit (1) measures the signal strength again (column 7, lines 44-51).

However, Lussenhop fails to teach a base station including extrapolating means for extrapolating operating results of said handset if said handset was capable of a performance enhancement.

In an analogous art, Johansson teaches a receiver (150), reading on claimed "base station," that measures the signal strength and duration of transmissions from the mobile stations (130) and as the receiver (150) takes the signal strength measurements, the processor (160), reading on claimed "means for extrapolating," records the data and extrapolates cellular telephone traffic volume (column 5, lines 54-60).

It would have been obvious to one of ordinary skill in the art at the time of invention to further require the base station, taught by Lussenhop, to possess extrapolating means for extrapolating operating results of said handset if said handset was capable of a performance enhancement, as taught by Johansson, to provide the capability of a user to predict the operating results.

However, Lussenhop and Johansson fail to teach a display means for displaying an indicator on said handset, said indicator showing the extrapolated operating results of said handset with the enhancement and the operating results of said handset without the performance enhancement.

In an analogous art, Muthuswamy teaches a call quality indicator application (250), reading on claimed "display means," that provides mobile users feedback on overall call quality of the two-way link for each of a plurality of communication calls (page 4, paragraph 34). The application enables users at both ends to gain a better understanding of the link that is having the problems using the call quality indicator application (250) (page 4, paragraph 34). In Figures 4 and 5, Muthuswamy teaches a display (240) of the communication device in which a first call quality indicator (300), reading on claimed "indicator," showing the quality of communication between the originating communication device and the corresponding base station and a second call quality indicator (305), reading on claimed "indicator," showing the quality of communication between the destination device of the call and the corresponding base station (page 5, paragraph 39). He further teaches the call quality indicator application (250) determines the first call quality indicator (300) and the second call quality indicator (305) to be displayed based on either RSSI (received signal strength) or BER (bit error rate) (page 5, paragraph 40).

It would have been obvious to one of ordinary skill in the art at the time of invention require the wireless communication system comprising a handset, taught by Lussenhop, and a base station possessing extrapolating means for extrapolating operating results of said handset if said handset was capable of a performance enhancement, as taught by Johansson, that the handset possesses display means for displaying an indicator on said handset and the indicator showing the extrapolated operating results of said handset with the performance enhancement

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and the operating results of said handset without the performance enhancement, as taught by Muthuswamy, to display to the user the prediction of the operating results with the amplifier turned on and off.

As to claim 22, Lussenhop, Muthuswamy, and Johansson teach everything as applied in claim 27; however, neither Lussenhop or Johansson teach said indicator includes differently labeled elements to distinguish between operating results with the performance enhancement active and the performance enhancement inactive.

Muthuswamy further teaches in Figure 5 the difference between the indicators (300) and (305) as the indicator (300) demonstrates a good quality signal by displaying several vertical bars and the indicator (305) demonstrates a poor signal quality by not displaying any vertical bars (see also page 5, paragraph 40).

It would have been obvious to one of ordinary skill in the art at the time of invention to further limit the wireless communication system, handset, base station, and indicator, taught by Lussenhop, Muthuswamy, and Johansson, so that the indicator includes differently labeled elements to distinguish between operating results with the performance enhancement active and the performance enhancement inactive, also taught by Muthuswamy, to provide the user the ability to easily discern the difference in signal quality between the two indicators.

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6. **Claims 2-3** is rejected under 35 U.S.C. 103(a) as being unpatentable over Lussenhop and Muthuswamy as applied in claim 1 above in view of well known prior art (MPEP 2144.03).

As to **claim 2**, Lussenhop and Muthuswamy teach everything as applied in claim 1; however, neither disclose wherein steps (a) and (b) are performed before steps (c) and (d).

The Examiner takes Official Notice that switching the order of steps within a method, when the order of steps within the method is not crucial, was extremely well known in the art.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify the steps of the method, taught by Lussenhop and Muthuswamy, to require steps (a) and (b) be performed before (c) and (d), as taught by well known prior art, to provide flexibility for the wireless user to carry out the method.

As to **claim 3**, Lussenhop and Muthuswamy teach everything as applied in claim 1; however, neither disclose wherein steps (c) and (d) are performed before steps (a) and (b).

The Examiner takes Official Notice that switching the order of steps within a method, when the order of steps within the method is not crucial, was extremely well known in the art.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify the steps of the method, taught by Lussenhop and Muthuswamy, to require steps (c) and (d) be performed before (a) and (b), as taught by well known prior art, to provide flexibility for the wireless user to carry out the method.

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7. **Claims 12-15** are rejected under 35 U.S.C. 103(a) as being unpatentable over Lussenhop and Muthuswamy as applied in claims 9 and 11 above and in view of well known prior art (MPEP 2144.03).

As to **claim 12**, Lussenhop and Muthuswamy teach everything as applied in claims 9 and 11; however, neither teach the elements of said indicator are labeled in different colors.

The Examiner takes Official Notice that it was old and well known in the art at the time of invention that elements of an indicator could be different colors either to distinguish each element or for aesthetic purposes.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to require the handset and indicator, taught by Lussenhop and Muthuswamy, that the elements of said indicator are labeled in different colors, as taught by well known prior art, to differentiate comparison results to the user.

As to **claim 13**, Lussenhop and Muthuswamy teach everything as applied in claims 9 and 11, however, neither teach the elements of said indicator are labeled in different types of styles.

The Examiner takes Official Notice that is was old and well known in the art at the time of invention that elements of an indicator could be labeled in different types of styles either to distinguish each element or for aesthetic purposes.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to require the handset and indicator, taught by Lussenhop and Muthuswamy, that the elements of said indicator are labeled in different types of styles, as taught by well known prior art, to distinguish operating results of the performance enhancement to the wireless user.

As to **claim 14**, Lussenhop and Muthuswamy teach everything as applied in claims 9 and 11, however, neither teach the elements of said indicator are labeled in different fonts.

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The Examiner takes Official Notice that it was old and well known in the art at the time of invention that elements of an indicator could be labeled in different types of fonts either to distinguish differing information displayed on the display to the user or for aesthetic purposes.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to require the handset and indicator, taught by Lussenhop and Muthuswamy, that the elements of said indicator are labeled in different types of fonts, as taught by well known prior art, to demonstrate to the wireless user the difference between the operating results of the performance enhancement.

As to claim 15, Lussenhop and Muthuswamy teach everything as applied in claims 9 and 11, however, neither teach the elements of said indicator are separated by a marker.

The Examiner takes Official Notice that it was old and well known in the art at the time of invention that elements of an indicator could be separated by a marker to separate the results of differing computations,

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to require the handset and indicator, taught by Lussenhop and Muthuswamy, that the elements of said indicator are separated by a marker, as taught by well known prior art, to separate the operating results from testing the performance enhancement for ease of reading on the display by the wireless user.



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8. **Claims 23-26** are rejected under 35 U.S.C. 103(a) as being unpatentable over Lussenhop, Muthuswamy, and Zhang as applied in claims 18 and 22 above and in view of well known prior art (MPEP 2144.03).

As to **claim 23**, Lussenhop, Muthuswamy, and Zhang teach everything as applied in claims 18 and 22; however, neither teach the elements of said indicator are labeled in different colors.

The Examiner takes Official Notice that it was old and well known in the art at the time of invention that elements of an indicator could be different colors either to distinguish each element or for aesthetic purposes.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to require the handset and indicator, taught by Lussenhop, Muthuswamy, and Zhang, that the elements of said indicator are labeled in different colors, as taught by well known prior art, to differentiate comparison results to the user.

As to **claim 24**, Lussenhop, Muthuswamy, and Zhang teach everything as applied in claims 18 and 22; however, neither teach the elements of said indicator are labeled in different types of styles.

The Examiner takes Official Notice that is was old and well known in the art at the time of invention that elements of an indicator could be labeled in different types of styles either to distinguish each element or for aesthetic purposes.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to require the handset and indicator, taught by Lussenhop, Muthuswamy, and Zhang, that the elements of said indicator are labeled in different types of styles, as taught by well known prior art, to distinguish operating results of the performance enhancement to the wireless user.

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As to **claim 25**, Lussenhop, Muthuswamy, and Zhang teach everything as applied in claims 18 and 22; however, neither teach the elements of said indicator are labeled in different fonts.

The Examiner takes Official Notice that is was old and well known in the art at the time of invention that elements of an indicator could be labeled in different types of fonts either to distinguish differing information displayed on the display to the user or for aesthetic purposes.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to require the handset and indicator, taught by Lussenhop, Muthuswamy, and Zhang, that the elements of said indicator are labeled in different types of fonts, as taught by well known prior art, to demonstrate to the wireless user the difference between the operating results of the performance enhancement.

As to **claim 26**, Lussenhop, Muthuswamy, and Zhang teach everything as applied in claims 18 and 22; however, neither teach the elements of said indicator are separated by a marker.

The Examiner takes Official Notice that is was old and well known in the art at the time of invention that elements of an indicator could be separated by a marker to separate the results of differing computations,

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to require the handset and indicator, taught by Lussenhop, Muthuswamy, and Zhang, that the elements of said indicator are separated by a marker, as taught by well known prior art, to separate the operating results from testing the performance enhancement for ease of reading on the display by the wireless user.

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9. **Claims 29-32** are rejected under 35 U.S.C. 103(a) as being unpatentable over Lussenhop, Muthuswamy, and Johansson as applied in claims 27 and 28 above and in view of well known prior art (MPEP 2144.03).

As to **claim 29**, Lussenhop, Muthuswamy, and Johansson teach everything as applied in claims 27 and 28; however, neither teach the elements of said indicator are labeled in different colors.

The Examiner takes Official Notice that it was old and well known in the art at the time of invention that elements of an indicator could be different colors either to distinguish each element or for aesthetic purposes.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to require the handset and indicator, taught by Lussenhop, Muthuswamy, and Johansson, that the elements of said indicator are labeled in different colors, as taught by well known prior art, to differentiate comparison results to the user.

As to **claim 30**, Lussenhop, Muthuswamy, and Johansson teach everything as applied in claims 27 and 28; however, neither teach the elements of said indicator are labeled in different types of styles.

The Examiner takes Official Notice that it was old and well known in the art at the time of invention that elements of an indicator could be labeled in different types of styles either to distinguish each element or for aesthetic purposes.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to require the handset and indicator, taught by Lussenhop, Muthuswamy, and Johansson, that the elements of said indicator are labeled in different types of styles, as taught by well known prior art, to distinguish operating results of the performance enhancement to the wireless user.

As to claim 31, Lussenhop, Muthuswamy, and Zhang teach everything as applied in claims 27 and 28; however, neither teach the elements of said indicator are labeled in different fonts.

The Examiner takes Official Notice that is was old and well known in the art at the time of invention that elements of an indicator could be labeled in different types of fonts either to distinguish differing information displayed on the display to the user or for aesthetic purposes.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to require the handset and indicator, taught by Lussenhop, Muthuswamy, and Johansson, that the elements of said indicator are labeled in different types of fonts, as taught by well known prior art, to demonstrate to the wireless user the difference between the operating results of the performance enhancement.

As to claim 32, Lussenhop, Muthuswamy, and Johansson teach everything as applied in claims 27 and 28; however, neither teach the elements of said indicator are separated by a marker.

The Examiner takes Official Notice that is was old and well known in the art at the time of invention that elements of an indicator could be separated by a marker to separate the results of differing computations,

10. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to require the handset and indicator, taught by Lussenhop, Muthuswamy, and Johansson, that the elements of said indicator are separated by a marker, as taught by well known prior art, to separate the operating results from testing the performance enhancement for ease of reading on the display by the wireless user.

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***Conclusion***

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Olivia Marsh whose telephone number is 571-272-7912. The examiner can normally be reached on 8:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marsha Banks-Harold can be reached on 571-272-7905. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
**CHARLES APPIAH**  
**PRIMARY EXAMINER**